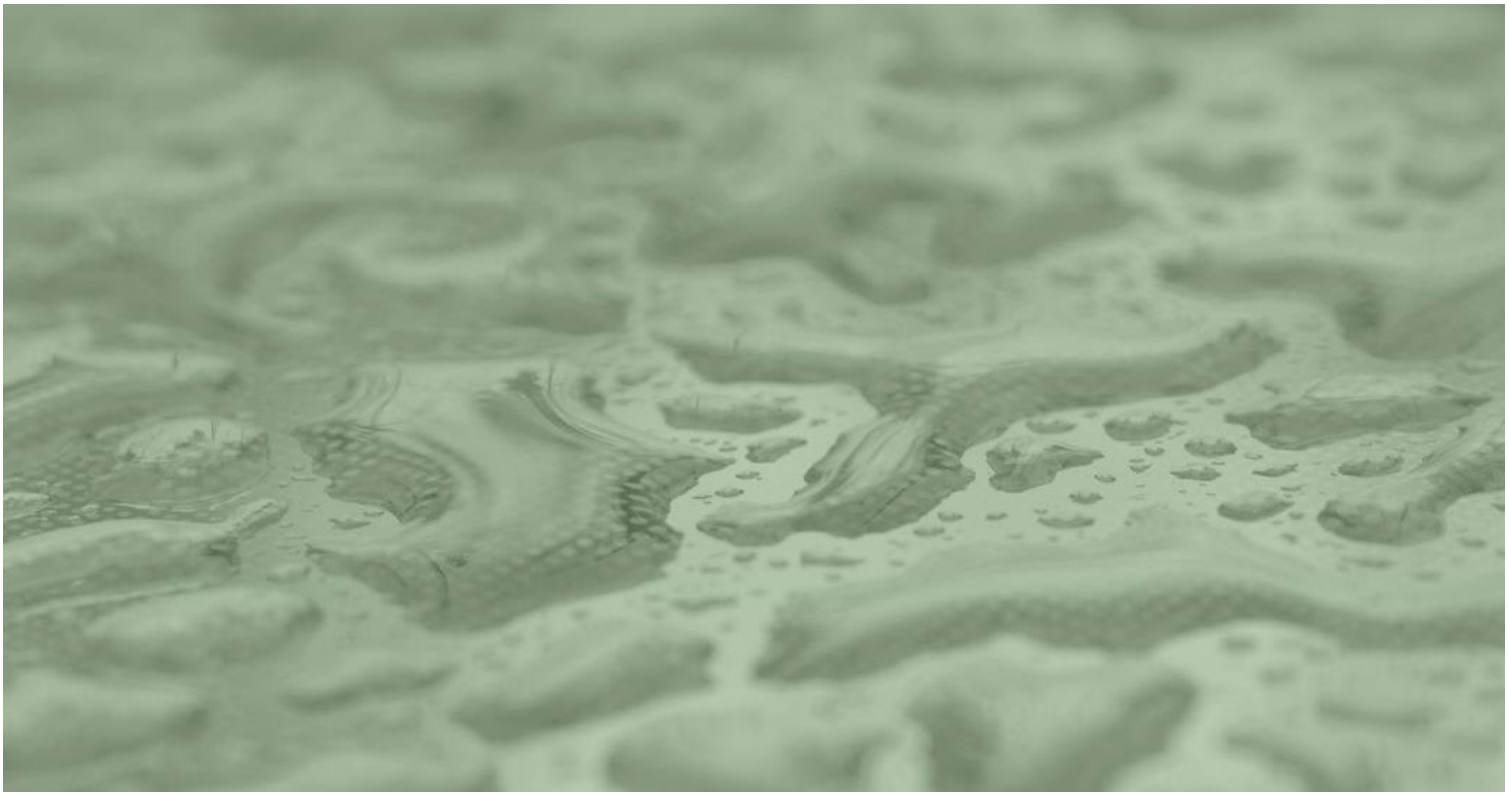

City of Sandy Springs, Georgia

Stormwater Management Plan (SWMP)

National Pollutant Discharge & Elimination System (NPDES)
Phase II Municipal Separate Storm Sewer System (MS4) Permit 2012

Submitted to:
Environmental Protection Division
Georgia Department of Natural Resources

Revised and Approved by EPD on April 20, 2016

Ecological Planning Group
7 East Congress Street/ Suite 801 / Savannah, GA 31401
http://ecologicalplanning.net

TABLE OF CONTENTS

APPENDICES

ACRONYMS/DEFINITIONS

BMPs	Best Management Practices
CIP	Capital Improvement Project
COSS	City of Sandy Springs
E&S	Erosion & Sedimentation
EOC	Emergency Operations Center
EPD	Georgia Environmental Protection Division
ERP	Enforcement Response Plan
ESPC	Erosion, Sedimentation & Pollution Control
GESA	Georgia Erosion & Sedimentation Act
GIS	Geographic Information System
GSMM	Georgia Stormwater Management Manual
GSWCC	Georgia Soil & Water Conservation Commission
IDDE	Illicit Discharge Detection & Elimination
LDP	Land Disturbance Permit
LIA	Local Issuing Authority
MNGWPD	Metropolitan North Georgia Water Planning District
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge & Elimination System
POC	Pollution of Concern
QA/QC	Quality Assurance/Quality Control
ROW	Right of Way
SOP	Standard Operating Procedure
SWCD	Soil and Water Conservation District
SWMP	Stormwater Management Plan
TSS	Total Suspended Solids

EXECUTIVE SUMMARY

The City of Sandy Springs (COSS) has renewed its coverage under the National Pollutant Discharge and Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) Permit on December 6, 2012, as required by provisions of the Georgia Water Quality Control Act and the Federal Clean Water Act. This permit requires the development of a Stormwater Management Plan (SWMP), to address the following provisions of Section 4.2 Minimum Measures:

- Public Education
- Public Involvement
- Illicit Discharge Detection and Elimination
- Erosion & Sedimentation (E&S) Control
- Post Construction Stormwater Management Control
- Good Housekeeping

The NPDES Phase II MS4 Permit also requires that the SWMP address additional future requirements, as follows:

- Development of an Enforcement Response Plan (ERP) by 2014
- Impaired Waterway Monitoring and Implementation Plan by 2015
- Green Infrastructure Ordinance review by 2015; update by 2016, if needed

LOCAL WATERWAYS TO WHICH THE MS4 DISCHARGES

The City of Sandy Spring's MS4 discharges to six major watersheds, including 1) Crooked Creek, 2) Heards Creek, 3) Long Island Creek, 4) Marsh Creek, 5) Nancy Creek, and 6) Sullivans Creek. All streams ultimately discharge into the Chattahoochee River Basin. Table 1 summarizes the 303(d) listed streams and the pollutant within the COSS limits.

Table 1: Streams within the COSS listed on the Georgia 2012 303(d) List

Reach	County	Location	Extent (miles)	Pollutant of Concern	TMDL Approved	Source
Ball Mill Creek	Fulton/ DeKalb	Fulton /DeKalb	3	FC	Yes	Urban runoff
Chattahoochee River	Fulton/ Cobb	Morgan Fall Dam to Peachtree Creek	12	FC, FCG (PCBs)	Yes	Urban runoff Fish Consumption Guidelines due to PCBs.

Reach	County	Location	Extent (miles)	Pollutant of Concern	TMDL Approved	Source
Chattahoochee River	Gwinnett/ Fulton /Cobb	Johns Creek to Morgan Falls Dam	17	FC	Yes	Urban runoff
Crooked Creek	Gwinnett	Tributary to Chattahoochee River	2	FC, Bio F	Yes	Urban runoff
Long Island Creek	Fulton	Headwaters to the Chattahoochee River	5	FC, Bio F	Yes	Urban runoff
Marsh Creek (aka March Creek)	Fulton	Headwaters to the Chattahoochee River	4	FC	Yes	Urban runoff
Nancy Creek	Fulton/ DeKalb	Headwaters to the Peachtree Creek, Atlanta River	16	FC, Bio F	Yes	Urban runoff

FC = Fecal Coliform; Bio F = Biota Impacted (Fish Community); FCG= Fish Consumption Guidance

This document is intended for reference use only and does not replace Georgia's official 2012 303(d) list. Any discrepancy or inconsistency between this document and the official 303(d) list should be resolved by referring to the official 2012 305(b)/303(d) list.

A. PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

40 CFR Part 122.34(b)(1) Requirement: You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.1(a) of the NPDES Phase II MS4 permit.

A.1. BMP: STORMWATER EDUCATION

Permit Section: 4.2.1(a)1

A.1.1. Target Audience

Residents of Sandy Springs

A.1.2. Description of BMP

The COSS will publish two articles/stories in the Sandy Springs Times (or other local news medium) to inform the public of stormwater management topics and other local stormwater related issues. Topics will include, but are not limited to:

- Preventing Stormwater Pollution
- Reporting Illicit Discharges
- Proper Disposal of Hazardous Materials
- Good Housekeeping Measures for residential and commercial properties

These articles will also be published on the COSS Stormwater Management Webpage.

A.1.3. Measurable Goal(s):

a. The COSS will publish two (2) articles/stories per year

A.1.4. Documentation to be submitted with each annual report:

Each article published within the reporting year will be submitted with that year's annual report.

A.1.5. Schedule:

a. *Interim Milestone Dates:* Establish webpage tracking mechanism by December 2014
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Articles/stories will be published twice per year
d. *Month/Year of Each Action:* 2013 - 2017

A.1.6. Person (position) responsible for overall management and implementation of the BMP: Communications Director in coordination with the Public Works Stormwater Unit Manager

A.1.7. Rationale for choosing BMP and setting measurable goal(s):

The BMP provides information to the public on stormwater management related issues in a format that they are more likely to view, i.e. website and newspapers. Furthermore, because this information is generated twice per year, the COSS can keep the public up-to-date on new and developing issues related to stormwater.

A.1.8. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The Sandy Springs Times or other medium used has records of its distribution, and the COSS will maintain records of the number of visitors to the webpage where the articles are posted.

A.2. BMP: STORMWATER WEBPAGE

Permit Section: 4.2.1(a)1

A.2.1. Target Audience

General public, businesses and industries

A.2.2. Description of BMP

The webpage address is http://www.sandyspringsga.org/stormwater. This webpage includes general information on stormwater pollution prevention, as well as more specific information including:

- Reporting of illicit discharges
- NPDES Phase II MS4 Permit
- Stormwater Brochures
- Flood Management Program
- Stormwater Advisory Team Information
- Watershed Improvement Studies/Plans
- Community Involvement Opportunities

The COSS will continue to monitor and update the information on this website on an annual basis. The COSS will encourage the public to visit this site by including the web address in the following outreach materials, such as: press releases, newsletters, e-newsletters, Facebook page, etc. The COSS will establish an internal tracking mechanism to count the number of visitors that view and click on the Stormwater Webpage by December, 2014.

A.2.3. Measurable Goal(s):

a. The COSS will review and update the information on the website once per year
b. The COSS will encourage the public to visit the webpage once per year through local media, newsletters or other forms of City communications

A.2.4. Documentation to be submitted with each annual report

The number of times the webpage is viewed annually by counting the number of clicks from outside users will be included in that year's annual report.

A.2.5. Schedule:

a. *Interim Milestone Dates:* Establish webpage tracking mechanism by December 2014
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Update website as needed
   Advertise website as needed
   Report webpage visitors annually
d. *Month/Year of Each Action:* 2013 – 2017

A.2.6. Person (position) responsible for overall management and implementation of the BMP: Communications Director

A.2.7. Rationale for choosing BMP and setting measurable goal(s):

The BMP provides information to the public on stormwater management related issues in a format that they are more likely to view, i.e. website. Furthermore, because this information is updated once per year, the COSS can keep the public up-to-date on new and developing issues related to stormwater.

A.2.8. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will establish an internal tracking mechanism to count the number of visitors that view and click on the Stormwater Webpage. This data will allow the COSS to track the number of visitors who view educational materials.

B. PUBLIC INVOLVEMENT / PARTICIPATION

40 CFR Part 122.34(b)(2) Requirement: You must, at a minimum, comply with State, Tribal, and local public notice requirements when implementing a public involvement/ participation program.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.2(a) of the NPDES Phase II MS4 permit.

B.1 BMP: STORM DRAIN DECAL LABELING

Permit Section: 4.2.2(a)1

B.1.1. Target Audience

Community groups, schools, local volunteer organization, and the general public.

B.1.2. Description of BMP

The COSS storm sewer system consists of over 4,554 storm drains. There are many citizens who do not know that whatever enters into these drains empties out into the City's local waterways. The storm drain labeling program allows for the citizens to become educated about where stormwater flows throughout the storm system as well as allows them to educate their neighbors. Residents will be encouraged on the City's website to volunteer to label the storm drains throughout the City with decals that read "No Dumping, Drains to River." The residents will pick up supplies for the drain decal labeling from Sandy Springs City Hall, label the drains (per labeling instructions) of an area in need of decals as designated by the COSS Public Works Department, complete a log, including name of volunteer and number of drains labeled with decals, and return the supplies and log to COSS.

B.1.3. Documentation to be submitted with each annual report

A log of information from each decal labeling project, which will include the name of the resident leading the project, the area of where the decals are installed, the number of decals installed, and the date that they were installed.

B.1.4. Measurable Goal(s):

a. Install decals on storm drains annually.

B.1.5. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date: 2016*
c. *Frequency of Actions:* continuously throughout the year
d. *Month/Year of Each Action:* 2016 - 2017

B.1.6. Person (position) responsible for overall management and implementation of the BMP: Public Works Stormwater Unit Manager

B.1.7. Rationale for choosing BMP and setting measurable goal(s):
The COSS has adopted this BMP to facilitate public participation in educating their neighbors regarding where stormwater flows when in enter into the drains. In the past, it has proven to be an effective tool in educating the public about stormwater runoff and its effects.

B.1.8. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit:
The COSS maintains a log of all decals installed and the location of where they are installed. Throughout the years of implementing this BMP, the number of decals installed on the drains will increase.

B.2. BMP: STREAM CLEANUPS

Permit Section: 4.2.2(a)1

B.2.1. Target Audience

Community groups, such as Watershed Alliance, schools, local volunteer organization and the general public

B.2.2. Description of BMP

The COSS will prioritize those watersheds that are included on the 303(d) list of impaired waterways. Once the organizations are identified, the participants will help the City select a date and a stream segment to be cleaned. A stream segment that has a safe entrance and exit with convenient parking at one end should be selected. Material removed from the streamside will be bagged. The material will be taken to a landfill and the gross weight of the material will be estimated. The COSS will advertise these events to the public through its website and other outreach avenues.

B.2.4 Measurable Goal(s):

a. Hold one stream clean up per year

B.2.5. Documentation to be submitted with each annual report

Location of cleanup, approximate number of volunteers that participated, as well as an estimate of the gross weight of trash collected through the cleanup will be included in that year's annual report

B.2.6. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* One stream clean up per year
d. *Month/Year of Each Action:* 2013 - 2017

B.2.7. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager

B.2.8. Rationale for choosing BMP and setting measurable goal(s):

Urban streams are often unnoticed and unappreciated as a natural resource. The object of having a streamside cleanup program is to facilitate public participation in stormwater decisions and planning while making the public aware of this natural resource and improving the health of our streams. Once streams are more visible to the public, the condition of the streams will become important and people will begin to behave in a manner that will improve the health of our streams.

B.2.9. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will be able to keep records of the amount of trash removed from the streams. This is a direct measurement of the effectiveness of this BMP in removing pollution.

C. ILLICIT DISCHARGE DETECTION AND ELIMINATION

40 CFR Part 122.34(b)(3) Requirement: You must develop, implement and enforce a program to detect and eliminate illicit discharges into your small MS4. You must:

A) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the State that receive discharges from those outfalls;

B) Effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions;

C) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to your system; and

D) Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.3(a) of the NPDES Phase II MS4 permit.

C.1. BMP: ILLICIT DISCHARGE ORDINANCE ENFORCEMENT

Permit Section: 4.2.3(a)1

C.1.1. Description of BMP

The COSS has adopted the Metropolitan North Georgia Water Planning District's (MNGWPD) Model Illicit Discharge and Illegal Connection Ordinance. This ordinance prohibits non-stormwater discharges into the storm sewer system and establishes appropriate enforcement procedures.

C.1.2. Measurable Goal(s):

a. Enforce 100% of violations of the ordinance
b. If a change to the ordinance has been made, a copy of the updated ordinance will be included in the annual report.

C.1.3. Documentation to be submitted with each annual report

Documentation of violations will be submitted with each annual report reflecting 100% of violations will be enforced. If a change to the ordinance has been made, the new ordinance will be submitted with the annual report.

C.1.4. Schedule:

a. *Interim Milestone Dates:* n/a

b. *Implementation Date:* 2013
c. *Frequency of Actions:* As violations are identified
d. *Month/Year of Each Action:* 2013 - 2017

C.1.5. Person (position) responsible for overall management and implementation of the BMP: Community Development Director in coordination with Public Works Stormwater Unit Manager

C.1.6. Rationale for choosing BMP and setting measurable goal(s):

The COSS adopted the model IDDE ordinance on December 13, 2005 (see Appendix A for Enacted Ordinance).

C.1.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of illicit discharges eliminated through enforcement of this ordinance.

C.2. BMP: MS4 OUTFALL INVENTORY

Permit Section: 4.2.3(a)2

C.2.1. Description of BMP

The COSS completed an initial inventory of the entire MS4, including outfalls, in 2009. The NPDES Phase II MS4 permit defines an "MS4 Outfall" to be "the most downstream point (i.e. final discharge point) on an MS4 where it discharges to waters of the State." This original inventory identified all outfalls, both MS4 outfalls, as defined by EPD, as well as outfalls within the MS4 (i.e. an end of a pipe that flows to another MS4 component). The COSS is in the process of reviewing the current inventory of outfalls and identifying true MS4 outfalls, as defined by EPD. This review will be conducted through GIS analysis and field confirmation. A map of the current inventory of MS4 outfalls is included in Appendix B. There are currently 630 MS4 outfalls with another 283 outfalls requiring field verification; therefore, the total inventory the COSS will be verifying is 913.

C.2.2. Measurable Goal(s):

a. Maintain and update inventory of MS4 Outfalls

C.2.3. Documentation to be submitted with each annual report

Each annual report will have an updated map and inventory if adjustments have been made that year to the total number of MS4 outfalls within the system.

C.2.4. Schedule:

a. *Interim Milestone Dates:* Review current outfall inventory in 2013
b. *Implementation Date:* Submit updated map of MS4 outfalls to EPD by February 15, 2014
c. *Frequency of Actions:* Update inventory as new outfalls are added and deleted
d. *Month/Year of Each Action:* 2013 – 2017

C.2.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager

C.2.6. Rationale for choosing BMP and setting measurable goal(s):

The COSS needs an updated inventory of its MS4 outfalls to implement an effective dry weather screening program. Ensuring that outfalls screened are actual MS4 outfalls will make the most efficient use of City resources.

C.2.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of illicit discharges eliminated through implementation of the dry weather screening program.

C.3. BMP: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN

Permit Section: 4.2.3(a)3

C.3.1. Description of BMP

The COSS will implement its IDDE Plan, included in Appendix C, and perform screening of MS4 outfalls within its current inventory at the rate of approximately 20% per year, in accordance with the IDDE Plan. The COSS will rotate the 20% of outfalls screened so that 100% of the inventory of MS4 outfalls is screened over a five-year period. The COSS will investigate any potential illicit discharges in accordance with the IDDE Plan. Should the COSS positively identify any illicit discharges, the COSS will implement the Illicit Discharge Ordinance for 100% of positively identified illicit discharges. Suspect or obvious illicit discharges require follow-up actions and activities to determine the specific source(s) of contamination. There are a variety of methods for illicit discharge source identification/tracing, including: mapping analysis, drainage area investigation, piping schematic review, smoke testing, dye testing and septic system investigation. Once the illicit discharge is traced back to the source, the discharge will be eliminated. As stated within the IDDE Plan, the City, either through the Public Works department or the City's Code Enforcement department, will enforce the applicable provisions of the Illicit Discharge Ordinance.

C.3.2. Measurable Goal(s):

a. Dry weather screen 100% of all MS4 outfalls over the course of this permit period
b. Investigate and perform source tracing for 100% of all suspected illicit discharges
c. Enforce the Illicit Discharge Ordinance and ERP for 100% of positively identified illicit discharges

C.3.3. Documentation to be submitted with each annual report

Each annual report will have inspection forms submitted during that year's reporting period.

C.3.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* 20% of outfalls screened annually
d. *Month/Year of Each Action:* 2013 - 2017

C.3.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Director in coordination with the Public Works Stormwater Unit Manager

C.3.6. Rationale for choosing BMP and setting measurable goal(s):

Dry weather screenings are useful in identifying illicit discharges and sources. Appropriate corrective and enforcement actions will be taken if an illicit discharge is detected.

C.3.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of illicit discharges investigated and eliminated through implementation of this BMP.

C.4. BMP: ILLICIT DISCHARGE EDUCATION

Permit Section: 4.2.3(a)4

C.4.1. Description of BMP

The COSS will continue to make publicly available information on illicit discharge prevention. The purpose of this BMP is to inform the public, employees, and businesses of the hazards associated with illegal discharges and how to prevent them in the household and/or workplace. The COSS will include education information on illicit discharges on the stormwater webpage and will address illicit discharges in its stormwater articles at least once per year. Educational materials will all encourage residents to report illicit discharges and illicit dumping, and will include the City Hall Citizen Response Center number. In addition, the COSS stormwater webpage includes a link to allow residents to report illicit discharges/dumping through the website. This BMP is closely related to the Public Education BMPs A.1 and A.2 and IDDE BMP C.5.

C.4.2. Measurable Goal(s):

a. Evaluate the COSS webpage illicit discharge educational information annually and update as needed.

C.4.3. Documentation to be submitted with each annual report

Articles made publicly available on the COSS website will be submitted with each annual report. The number of times (clicks) the webpage is viewed will also be reported annually.

C.4.4. Schedule:

a. *Interim Milestone Dates:* Establish webpage tracking mechanism by December 2014
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Annually
d. *Month/Year of Each Action:* 2013 - 2017

C.4.5. Person (position) responsible for overall management and implementation of the BMP:

Communications Director in coordination with the Public Works Stormwater Unit Manager

C.4.6. Rationale for choosing BMP and setting measurable goal(s):

Increase public awareness on the negative effects of illicit discharges into streams and how to prevent these occurrences.

C.4.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will establish an internal tracking mechanism to count the number of visitors that view and click on the Stormwater Webpage. This data will allow the COSS to track the number of visitors who view educational materials.

C.5. BMP: CITIZEN COMPLAINT RESPONSE

Permit Section: 4.2.3(a)5

C.5.1. Description of BMP

The COSS has implemented a program for receiving, investigating, and tracking the status of illicit discharge complaints.

Residents have the option to report issues via:

- Website, either by knowing the address or finding and clicking on an interactive map: http://www.sandyspringsga.org. The COSS website also has a tab on the homepage, entitled, "Report an Issue" (http://www.sandyspringsga.org/Contact-Us/Report-an-Issue. This tab allows residents to report any complaint (including erosion and sediment issues).
- Calling the 'call center': Complaints can be made by calling the City's Citizen Response Center at 770-730-5600, which receives calls 24 hours a day, seven days a week, or
- Using the COSSpotter free smart phone app for Android, Blackberry or iPhone.

Outside of business hours, one of the 24 hour agents enters the complaint into the City's work order database so it is available for action at the start of the following business day. All citizen complaints are directed to the appropriate department: Land Development or Public Works. Complaints are recorded by the COSS call center personnel using a computerized reporting system. Once the complaint is entered into the database system, the following occurs:

- The database is checked by the appropriate administrative personnel per department. These personnel check the database several times throughout the day.
- Every department's administrative personnel will immediately forward the complaint to the appropriate department if a mistake has been made in routing the initial call.
- Each department has a technician assigned to field complaints and will contact the complainant typically within 72 hours.
- The technician responds by:
  - Conducting an immediate inspection
- Resolution of the complaint varies for each issue, but typically the complaint is resolved that same day, during that first week, or within two weeks, depending on the severity of the issue. Significant issues can take two months or longer to completely resolve.

C.5.2. Measurable Goal(s):

a. Investigate illicit discharge complaints within three (3) business days
b. Record illicit discharge complaints in the electronic database

C.5.3. Documentation to be submitted with each annual report

Illicit discharge complaints as well as any action taken by the City to address the complaints will be compiled in an electronic database and reported annually

C.5.4. Schedule:

a. *Interim Milestone Dates:* Procedures for receiving, investigating, and tracking illicit discharge complaints will be completed and submitted to EPD by February 15, 2014.
b. *Implementation Date:* 2013
c. *Frequency of Actions:* As complaints are received
d. *Month/Year of Each Action:* 2013 - 2017

C.5.5. Person (position) responsible for overall management and implementation of the BMP:

Community Development Director in coordination with the Public Works Stormwater Unit Manager

C.5.6. Rationale for choosing BMP and setting measurable goal(s):

Illicit discharges may be more easily identified and corrected by providing the public a way to report complaints.

C.5.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of illicit discharge complaints investigated and the number of illicit discharges eliminated through this BMP.

D. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

40 CFR Part 122.34(b)(4) Requirement: You must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. Your program must include:

A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance;

B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

D) Procedures for site plan review which incorporate consideration of potential water quality impacts;

E) Procedures for receipt and consideration of information submitted by the public; and

F) Procedures for site inspection and enforcement of control measures.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.4(a) of the NPDES Phase II MS4 permit.

D.1. BMP: ENFORCE STATE MODEL EROSION & SEDIMENTATION CONTROL ORDINANCE

Permit Section: 4.2.4(a)1

D.1.1. Description of BMP

The COSS adopted the State model Erosion, Sedimentation and Pollution Control Ordinance (E&S Ordinance) in April of 2010 to reflect most recent amendments to the Georgia Erosion and Sedimentation Act (GESA). The COSS is a Local Issuing Authority (LIA) and also has a Memorandum of Agreement (MOA) with the Fulton County Soil & Water Conservation District that allows the COSS to conduct the review and approval of erosion, sedimentation and pollution control (ESPC) plans for Land Disturbance Permit (LDP) projects. The COSS will continue to enforce this ordinance and update it as mandated by the State to maintain its LIA status.

D.1.2. Documentation to be submitted with each annual report

Modification of an ordinance to include language in D.1.3.(b) will be completed by the permit's second annual report submittal date of February, 2015. Any other changes made to the ordinance during the term of the permit will be included in each year's annual report.

D.1.3. Measurable Goal(s):

a. Enforce ordinance
b. Update an ordinance, either E&S or litter, as required by the State to include the language: "*…construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site…*"

D.1.4. Schedule:

a. *Interim Milestone Dates:* Ordinance modification by February, 2015
b. *Implementation Date:* 2013
c. *Frequency of Actions:* As needed
d. *Month/Year of Each Action:* 2013 - 2017

D.1.5. Person (position) responsible for overall management and implementation of the BMP: Community Development Director in coordination with the Public Works Stormwater Unit Manager

D.1.6. Rationale for choosing BMP and setting measurable goal(s):

This ordinance is needed to allow the COSS to implement an Erosion and Sedimentation Control Program. It is also required by the State that all LIAs adopt the model ordinance.

D.1.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of E&S violations investigated and the number of sediment discharges eliminated through implementation of the ordinance.

D.2. BMP: SITE PLAN REVIEW

Permit Section: 4.2.4(a)2

D.2.1. Description of BMP

The COSS will conduct ESPC plan reviews for all development projects requiring an LDP and disturbing more than one (1) acre of land. The ESPC plans are reviewed by certified COSS staff (Level II Plan Reviewer). The COSS obtained a Memorandum of Understanding (MOU) with the Fulton County Soil and Water Conservation District (SWCD) in 2008 to conduct all ESPC plan reviews in-house. ESPC plans are reviewed for compliance with the Manual for Erosion and Sedimentation Control in Georgia "Green Book" and the E&S Ordinance.

D.2.2. Measurable Goal(s):

a. 100% of site plans for projects disturbing over one (1) acre of land will be reviewed by the COSS certified personnel

D.2.3. Documentation to be submitted with each annual report

A list of the site plans received and the number of site plans reviewed, approved or denied will be included in each year's annual report.

D.2.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* As ESPC plans are submitted
d. *Month/Year of Each Action:* 2013 - 2017

D.2.5. Person (position) responsible for overall management and implementation of the BMP:

Community Development Director

D.2.6. Rationale for choosing BMP and setting measurable goal(s):

Utilizing the Georgia Soil and Water Conservation Commission (GSWCC) standardized checklist to perform the plan review will ensure a consistent and comprehensive review process.

D.2.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

This BMP ensures that the developer implements an approved E&S plan to prevent sediment from leaving the construction site. State law mandates that discharges from developing sites cannot increase the Total Suspended Solids (TSS) in the receiving stream by more than 25 Nephelometric Turbidity Units (NTUs) so implementation of the approved ESPC plan should achieve that water quality goal.

D.3. BMP: EROSION & SEDIMENTATION (E&S) INSPECTIONS

Permit Section: 4.2.4(a)3

D.3.1. Description of BMP

The COSS certified personnel conducts inspections of construction sites and enforces requirements of the E&S Ordinance. All projects with an active LDP are to be inspected to ensure that proper E&S measures have been installed and maintained according to the approved ESPC plan. Inspectors visit the sites at the start of construction, soon after storm events, and after the site has been stabilized. Inspections are conducted by the Community Development Department by personnel certified in the fundamentals of E&S control. The lead inspector is required to have a Level II certification as a plan reviewer. Inspections are conducted following the *Field Manual for Erosion and Sediment Control in Georgia* ("Green Book"). If violations are discovered during an inspection, enforcement actions are taken in accordance with the E&S Ordinance included in Appendix A.

D.3.2. Measurable Goal(s):

a. Active development sites with an LDP are inspected at the start and completion of land disturbance activities, and after major rain events

D.3.3. Documentation to be submitted in each annual report:

A list of active construction sites and any inspections conducted will be included in the annual report for that reporting year.

D.3.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* As LDP projects are constructed
d. *Month/Year of Each Action:* 2013 - 2017

D.3.5. Person (position) responsible for overall management and implementation of the BMP:

Community Development Director in coordination with the CIP Inspectors

D.3.6. Rationale for choosing BMP and setting measurable goal(s):

E&S inspections and enforcement of the ordinance will prevent excessive erosion and sedimentation from construction activities.

D.3.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

This BMP ensures that developers implement approved ESPC plans to prevent sediment from leaving construction sites in the COSS. State law mandates that discharges from developing sites cannot increase the TSS in the receiving stream by more than 25 NTUs so implementation of the approved ESPC plan should achieve that water quality goal. The COSS

will keep records of the number and nature of E&S violations that were discovered and addressed through implementation of this BMP.

D.4. BMP: ENFORCEMENT PROCEDURES FOR EROSION & SEDIMENTATION VIOLATIONS

Permit Section: 4.2.4(a)4

D.4.1. Description of BMP

The COSS will implement enforcement procedures for E&S violations documented at construction sites in accordance with the E&S Ordinance and the enforcement response plan (ERP). The ERP will be developed and implemented and will include the ordinances providing legal authority to implement the E&S Ordinance, types of enforcement mechanisms available, escalation of enforcement, time frames for investigation, and the method to be used to track instances of non-compliance.

D.4.2. Measurable Goal(s):

a. 100% of identified violations at construction sites will be addressed within 3 days

D.4.3. Documentation to be submitted with each annual report

Documentation of any enforcement actions taken during the reporting period will be included in each annual report.

D.4.4. Schedule:

a. *Interim Milestone Dates:* Submit to EPD for approval by February 15, 2014
b. *Implementation Date:* Six (6) months after receiving EPD approval
c. *Frequency of Actions:* Ongoing
d. *Month/Year of Each Action:* 2013 - 2017

D.4.5. Person (position) responsible for overall management and implementation of the BMP:

Community Development Director and the Public Works Director

D.4.6. Rationale for choosing BMP and setting measurable goal(s):

Effective enforcement of the COSS ordinances is necessary to ensure that they appropriately regulate various aspects of the SWMP to protect water quality.

D.4.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain records of the number and nature of enforcement actions taken to enforce the ERP. These will be submitted to EPD in the Annual Report, beginning with the 2014 Annual Report.

D.5. BMP: CITIZEN COMPLAINT RESPONSE

Permit Section: 4.2.4(a)5

D.5.1. Description of BMP

The COSS has implemented a program for receiving, investigating, and tracking the status of erosion and sedimentation complaints.

Residents have the option to report issues via:

- Website, either by knowing the address or finding and clicking on an interactive map: http://www.sandyspringsga.org. The COSS website also has a tab on the homepage, entitled, "Report an Issue" (http://www.sandyspringsga.org/Contact-Us/Report-an-Issue. This tab allows residents to report any complaint (including erosion and sediment issues).
- Calling the 'call center': Complaints can be made by calling the City's Citizen Response Center at 770-730-5600, which receives calls 24 hours a day, seven days a week, or
- Using the COSSpotter free smart phone app for Android, Blackberry or iPhone.

Outside of business hours, one of the 24 hour agents enters the complaint into the City's work order database so it is available for action at the start of the following business day. All citizen complaints are directed to the appropriate department: Land Development or Public Works. Complaints are recorded by the COSS call center personnel using a computerized reporting system. Once the complaint is entered into the database system, the following occurs:

- The database is checked by the appropriate administrative personnel per department. These personnel check the database several times throughout the day.
- Every department's administrative personnel will immediately forward the complaint to the appropriate department if a mistake has been made in routing the initial call.
- Each department has a technician assigned to field complaints and will contact the complainant typically within 72 hours.
- The technician responds by:
  - Setting up an inspection appointment with the complainant
  - Automatically initiating a work order
  - Conducting an immediate inspection
- Resolution of the complaint varies for each issue, but typically the complaint is resolved that same day, during that first week, or within two weeks, depending on the severity of the issue. Significant issues can take two months or longer to completely resolve.

D.5.2. Measurable Goal(s):

a. Investigate E&S complaints within three (3) business days
b. Record E&S complaints in the electronic database

D.5.3. Documentation to be submitted with annual report

A summary of the erosion and sedimentation complaints received and any related actions taken by COSS in each reporting year will be submitted with the annual report.

D.5.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* As complaints are received
d. *Month/Year of Each Action:* 2013 - 2017

D.5.5. Person (position) responsible for overall management and implementation of the BMP: Community Development Director supported by the Public Works Stormwater Unit Manager

D.5.6. Rationale for choosing BMP and setting measurable goal(s):

E&S discharges may be more easily identified and corrected by providing residents a way to report complaints.

D.5.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number and types of E&S complaints investigated and the number of E&S discharges eliminated through implementation of this BMP.

D.6. BMP: EMPLOYEE E&S CERTIFICATION

Permit Section: 4.2.4(a)6

D.6.1. Description of BMP

GESA now requires all local government employees involved with plan review, site inspections, or E&S Ordinance enforcement, as well as construction site operators to undergo the applicable training seminars developed by the GSWCC. The COSS also requires all construction site operators to provide evidence in their LDA Permit application that they have received the appropriate certification. Evidence of site personnel certification must also be produced if requested by COSS inspectors during an E&S inspection. The COSS also requires all applicable staff to receive this training as soon as possible after the start of their employment.

D.6.2. Measurable Goal(s):

a. 100% of COSS employees involved in the E&S Program will receive applicable E&S certification
b. 100% of construction site operators with LDA permits will have applicable E&S certification

D.6.3. Documentation to be submitted with each annual report

Proof of certification for applicable employees will be submitted with each annual report.

D.6.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Ongoing
d. *Month/Year of Each Action:* 2013 - 2017

D.6.5. Person (position) responsible for overall management and implementation of the BMP:

Community Development Director in coordination with the Public Works Director

D.6.6. Rationale for choosing BMP and setting measurable goal(s):

By requiring certification for COSS employees (inspectors and plan reviewers) and for construction site operators, the COSS will ensure that ESPC plan is correctly designed and implemented on site.

D.6.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

This BMP ensures that E&S BMPs are installed correctly to prevent sediment from leaving the construction site. State law mandates that discharges from developing sites cannot increase the TSS in the receiving stream by more than 25 NTUs so implementation of the approved ESPC plan should achieve that water quality goal.

E. POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT & REDEVELOPMENT

40 CFR Part 122.34(b)(5) Requirement: You must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. You must:

A) Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for your community;

B) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development or redevelopment projects; and

C) Ensure adequate long-term operation and maintenance of BMPs.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.5(a) of the NPDES Phase II MS4 permit.

E.1. BMP: POST CONSTRUCTION STORMWATER MANAGEMENT ORDINANCE

Permit Section: 4.2.5(a)1

E.1.1. Description of BMP

The COSS adopted the MNGWPD's Post Construction Stormwater Management Ordinance and the Georgia Stormwater Management Manual (GSMM) on December 9, 2008. This ordinance and design manual provide requirements for stormwater management plans as part of site design, and sets standards for design criteria. All construction activities that disturb more than 5,000 sqft of area or create more than 5,000 sqft of impervious surface are required to comply. The design criteria within the COSS ordinance are consistent with those listed in Section 4.2.5.1 of the NDPES Phase II MS4 permit.

E.1.2. Measurable Goal(s):

a. Review 100% of stormwater management plans for all applicable projects
b. Enforce 100% of violations of the ordinance

E.1.3. Documentation to be submitted with each annual report

If the ordinance is revised during the reporting period, a copy of the newly adopted ordinance will be submitted with the annual report.

E.1.4. Schedule:

a. *Interim Milestone Dates:* n/a

b. *Implementation Date:* 2013
c. *Frequency of Actions:* As site plans are submitted and violations are identified
d. *Month/Year of Each Action:* 2013 - 2017

E.1.5. Person (position) responsible for overall management and implementation of the BMP: Community Development Director

E.1.6. Rationale for choosing BMP and setting measurable goal(s):

The COSS adopted the model Post Construction Stormwater Management ordinance and GSMM in 2005 (see Appendix A for enacted ordinance.)

E.1.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain the records of the number of stormwater management plans reviewed and approved in accordance with this ordinance and the GSMM. By taking a better site design approach to stormwater management plan design, the COSS will ensure that new and re-development projects comply with applicable post construction stormwater management requirements related to water quality. Furthermore, the ordinance and GSMM require that all stormwater management site plans be designed to reduce TSS by 80%.

E.2. BMP: DETENTION POND/STORMWATER CONTROL INVENTORY

Permit Section: 4.2.5(a)2

E.2.1. Description of BMP

The COSS maintains an inventory of stormwater controls/BMPs, including detention ponds. This inventory is contained in a GIS format, and a map is included in Appendix B. The COSS will update this database to remove privately-owned stormwater controls designed and constructed prior the adoption of the GSMM on December 9, 2008. The COSS will also update this inventory as new development and redevelopment occur. All structures owned and/or maintained by the COSS, regardless of construction date, will remain on the inventory; however, this inventory is subject to change depending on whether the COSS accepts more structures for maintenance purposes. The COSS will also update this inventory as new development and redevelopment occur.

E.2.2. Measurable Goal(s):

a. Update inventory of detention ponds/stormwater controls to remove those privately-owned structures designed and constructed prior to the adoption of the GSMM on December 9, 2008
b. Update inventory of publicly-owned and/or maintained by the COSS, regardless of construction date

E.2.3. Documentation to be submitted in each annual report

As new structures are constructed or existing structures are identified during the reporting period, an updated inventory and map will be included on that year's annual report.

E.2.4. Schedule:

a. *Interim Milestone Dates:* Update inventory of publicly owned structures and remove pre-2008 ponds/controls by February 15, 2014.
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Ongoing
d. *Month/Year of Each Action:* 2013 - 2017

E.2.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager in coordination with Public Works GIS Developer/Analyst

E.2.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP provides the information necessary for the COSS to implement the Private Detention Pond/Stormwater Control Inspection BMP E.3.

E.2.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

Detention ponds are supposed to be designed to remove 80% of TSS. Routine inspection and required maintenance ensure that ponds continue to function to meet this water quality goal.

E.3. BMP: STORMWATER FACILITY INSPECTION

Permit Section: 4.2.5(a)3

E.3.1. Description of BMP

The COSS has developed procedures for inspection of detention ponds and other stormwater management facilities. The Stormwater Facility Inspection and Maintenance Procedures are included in Appendix D. Per the approved procedures, the COSS will inspect approximately 20% of inventoried ponds per year such that 100% of the inventoried ponds will be inspected during the current permit period (2012 – 2017). As the inventory is updated, the number of inspections will be modified to reflect the current number of facilities. When inspections indicate a violation or problem with a private detention pond, the COSS will contact the owner and notify them of the maintenance needed per the procedures. If an Inspection and Maintenance Agreement is in place, the COSS will enforce the provisions of that agreement. If an Inspection and Maintenance Agreement is not in place, the COSS will attempt to work with property owners to perform the necessary maintenance. If inspections indicate a violation or problem with a publicly owned or maintained pond, the COSS will maintain the pond as needed in accordance with the procedures.

E.3.2. Measurable Goal(s):

a. Inspect 100% of detention ponds/stormwater facilities in the current inventory during this permit period (2012 -2017)

E.3.3. Documentation to be submitted with each annual report:

Inspection reports will be included with each year's annual report.

E.3.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Inspect 25% of ponds annually
d. *Month/Year of Each Action:* 2013 - 2017

E.3.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager

E.3.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP allows the COSS to ensure that detention ponds/stormwater controls are operating effectively to remove pollutants.

E.3.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

Detention ponds are supposed to be designed to remove 80% of TSS. Routine inspection and appropriate maintenance ensure that ponds continue to function to meet this water quality goal.

E.4. BMP: STORMWATER FACILITY MAINTENANCE

Permit Section: 4.2.5(a)4

E.4.1. Description of BMP

In order to compel the maintenance of privately-owned detention ponds or other stormwater facilities, the COSS adopted the MNGWPD Model Ordinance for Post-Construction Stormwater Management Control that requires private owners to maintain their structural controls. The ordinance requires that Inspection and Maintenance Agreements be developed for all new stormwater facilities designed in accordance with the ordinance. A copy of this agreement is included in Appendix A. The COSS is granted the authority through the ordinance to inspect private stormwater facilities to ensure that they are being maintained in accordance with the Inspection and Maintenance Agreement.

The COSS also has the responsibility to inspect and maintain 50 stormwater facilities/ponds that are either on COSS property or have been accepted by the COSS for maintenance. Maintenance is conducted in accordance with the standards for maintenance included in the GSMM. Inspections of these facilities will occur at the approximate rate of 25% per year so that 100% of the facilities will be inspected during this permit period. The COSS will perform maintenance activities based on the results of the inspection and in accordance with the Procedures for Detention Pond Inspection & Maintenance. Maintenance may include clearing the debris screen and any other inlet and outlet structures, removing trash and sediment from the pond, and re-grading the sides if possible. Upgrading and structural maintenance on inlet and outlet structures may also be performed as needed.

E.4.2. Measurable Goal(s):

a. Maintain COSS owned or COSS maintained stormwater facilities as needed and identified through inspections
b. Ensure that 100% of stormwater facilities, designed in accordance with the Post Construction Stormwater Management Ordinance, have a Maintenance and Inspection Agreement
c. Notify private owners with Inspection and Maintenance Agreements of detention pond maintenance needs identified through inspection

E.4.3. Documentation to be submitted with each annual report:

a. For COSS-owned structures and COSS-maintained structures, documentation of maintenance activities will be included with each year's annual report.
b. For privately-owned and maintained structures, inspection forms and maintenance agreements executed during a reporting year will be submitted with that year's annual report.
c. The COSS will not conduct maintenance on privately-owned structures prior to the effective date of the permit in its program.

E.4.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Annually, in accordance with inspection results
d. *Month/Year of Each Action:* 2013 - 2017

E.4.5. Person (position) responsible for overall management and implementation of the BMP: Community Development Director in coordination with Public Works Director

E.4.6. Rationale for choosing BMP and setting measurable goal(s):

By requiring developers/property owners to develop plans for inspecting and maintaining their detention ponds or other stormwater facilities through an Inspection and Maintenance Agreement, the COSS has the legal means to ensure that these facilities will be maintained and function properly after construction is complete.

E.4.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

Detention ponds are supposed to be designed to remove 80% of TSS. Routine inspection and appropriate maintenance ensure that ponds continue to function to meet this water quality goal.

E.5 BMP: GREEN INFRASTRUCTURE (GI) LOW IMPACT DEVELOPMENT (LID) STRUCTURE INVENTORY

Permit Section: 4.2.5(a)5

E.5.1. Description of BMP

The COSS shall develop an inventory of all GI/LID structures within the COSS. At a minimum this inventory will include those structures constructed after the effective date of the NPDES Phase II MS4 Permit, December 6, 2012. This inventory will contain information on the type, location, and number of GI/LD structures such as bio-retention, bio-swales, pervious pavement, green roofs, etc.

The COSS will complete the initial inventory and submit it to EPD with the second annual report, to be submitted in February 15, 2015. The COSS will continue to update this inventory as new GI/LID structures are constructed.

E.5.2. Measurable Goal(s):

a. Complete GI/LID structure inventory and submit to EPD in the annual report on February 15, 2015
b. Update inventory as new GI/LID structures are constructed

E.5.3 Documentation to be included with each annual report:

The updated inventory, including those structures added during that year's reporting year, will be included in that year's annual report**.**

E.5.4. Schedule:

a. *Interim Milestone Dates:* Submit inventory to EPD by February 15, 2015
b. *Implementation Date:* 2014
c. *Frequency of Actions:* As new GI/LID structures are constructed
d. *Month/Year of Each Action:* 2014 - 2017

E.5.5. Person (position) responsible for overall management and implementation of the BMP:

Coordination with Recreation and Parks Director and Public Works Stormwater Unit Manager

E.5.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP allows the COSS to identify the location of GI/LID structures.

E.5.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

Each type of GI/LID practice has an estimated pollutant removal efficiency. By encouraging the incorporation of these types of practices in new and redevelopment, the COSS can estimate the amount of pollutants being removed through these practices. Furthermore, an inventory is necessary for inspection and maintenance purposes.

E.6. BMP: GREEN INFRASTRUCTURE (GI) LOW IMPACT DEVELOPMENT (LID) ORDINANCE REVIEW

Permit Section: 4.2.5.2

E.6.1. Description of BMP

The COSS shall review and revise, where necessary, building codes, ordinances, and other regulations to ensure they do not prohibit or impede the use of GI/LID practices, including infiltration, reuse, and evapo-transpiration. The COSS intends to utilize the Center for Watershed Protection's Code and Ordinance Worksheet to perform this review. The Code and Ordinance Worksheet allows an in-depth review of the standards, ordinances, and codes (i.e., the development rules) that shape how development occurs in a community. The worksheet consists of a series of questions that correspond to each of the model development principles, including Green Infrastructure. Points are assigned based on how well the current development rules agree with the site planning benchmarks derived from the model development principles. Based on the results of this assessment, the COSS will identify which codes, if any, need to be updated/modified to allow for implementation of GI/LID practices.

The COSS will complete the initial evaluation within two years and submit a written report to EPD with the 2014 annual report, due February 15, 2015. Any necessary revisions will be completed within four years of the effective date of this Permit or no later than December 6, 2016, and adopted ordinances will be submitted to EPD by February 15, 2017.

E.6.2. Measurable Goal(s):

a. Complete ordinance and code review by December 6, 2014 and submit to EPD in the annual report on February 15, 2015
b. Update codes and ordinances as needed, based on the review, by December 6, 2016 and submit revised ordinances to EPD with the annual report on February 15, 2017

E.6.3. Documentation to be included with each Annual Report:

A summary of the code and ordinance review will be submitted with the 2014 Annual Report, and copies of any COSS ordinances amended as a result of this review will be included in subsequent annual reports.

E.6.4. Schedule:

a. *Interim Milestone Dates:* Complete review by December 6, 2014
   Submit Review to EPD by February 15, 2015
   Complete ordinance update by December 6, 2016
   Submit updated codes to EPD by February 15, 2017
b. *Implementation Date:* 2014
c. *Frequency of Actions:* As stated above.
d. *Month/Year of Each Action:* 2014 - 2017

E.6.5. Person (position) responsible for overall management and implementation of the BMP: Coordination with Community Development Director and Public Works Stormwater Unit Manager

E.6.5. Rationale for choosing BMP and setting measurable goal(s):
This BMP allows the COSS to ensure that its codes and ordinances allow for development that incorporates GI/LID practices.

E.6.6. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit
Each type of GI/LID practice has an estimated pollutant removal efficiency. By encouraging the incorporation of these types of practices in new and redevelopment, the COSS can estimate the amount of pollutants being removed through these practices.

F. POLLUTION PREVENTION/ GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

40 CFR Part 122.34(b)(6) Requirement: You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The BMPs listed below address the requirements above in accordance with the guidelines included in Table 4.2.6(a) of the NPDES Phase II MS4 permit.

F.1. BMP: MS4 INVENTORY

Permit Section: 4.2.6(a)1

F.1.1. Description of BMP

The COSS has developed and maintains an inventory of MS4 control structures including, but not limited to catch basins, inlets, pipes, ditches, and junctions. This inventory is contained in a GIS format, and a map is included in Appendix B. The breakdown list of the structures is included in Appendix E. The COSS will continue to update this data as development and redevelopment occur.

F.1.2. Measurable Goal(s):

a. Update inventory of MS4 control structures as new development or redevelopment occurs

F.1.3. Documentation to be submitted with each annual report:

The number of structures added or removed during the reporting period and the total number of structures will be reported annually. If new structures are added or removed a new inventory map will be provided in that year's annual report.

F.1.4. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Ongoing
d. *Month/Year of Each Action:* 2013 - 2017

F.1.5. Person (position) responsible for overall management and implementation of the BMP: Public Works Stormwater Unit Manager in coordination with Public Works GIS Developer/Analyst

F.1.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP provides the information necessary for the COSS to implement the MS4 Inspection and Maintenance BMPs.

F.1.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The MS4 must function as designed in order to reduce pollutants discharged from the system. Routine inspection and appropriate maintenance ensure that the MS4 continues to function to meet this water quality goal.

F.2. BMP: MS4 CONTROL STRUCTURE INSPECTIONS

Permit Section: 4.2.6(a)2

F.2.1. Description of BMP

The existing publicly-owned Municipal Separate Storm Sewer System (MS4) control structures will be inspected by the COSS. The COSS maintains the stormwater system within the right-of-way (ROW) and stormwater components and controls on property owned by the COSS or within an easement with an express acceptance by the COSS. It is the COSS intention to inspect each of the MS4 components listed in the MS4 inventory at least once every five years, or to inspect approximately 25% of the MS4 per year during the remaining permit period.

F.2.2. Measurable Goal(s):

a. Inspect 100% of MS4 structures during the current permit period

F.2.3. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Inspect 25% of the MS4 annually
d. *Month/Year of Each Action:* 2013 - 2017

F.2.4. Documentation to be submitted with each annual report:

The number and percentage of structures inspected during the reporting period will be included in each annual report.

F.2.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager

F.2.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP allows the COSS to ensure that the MS4 is functioning properly and to reduce the pollutants discharged from the system.

F.2.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The MS4 must function as designed in order to reduce pollutants discharged from the system. Routine inspection and appropriate maintenance ensure that the MS4 continues to function to meet this water quality goal.

F.3. BMP: MS4 MAINTENANCE

Permit Section: 4.2.6(a)3

F.3.1. Description of BMP

The COSS will perform maintenance activities based on the results of the inspection, in accordance with the MS4 Inspection and Maintenance procedures in Appendix E. Maintenance may include clearing debris, removing sediment, or re-grading ditches. Upgrading and structural maintenance on drainage structures may also be performed as needed.

F.3.2. Measurable Goal(s):

a. Maintain MS4 structures as needed, and as funding is available

F.3.3. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Ongoing
d. *Month/Year of Each Action:* 2013 - 2017

F.3.4. Documentation to be reported in each annual report:

The number of each type of structures maintained during the reporting year will be included in that year's annual report.

F.3.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager in coordination with Public Works Field Services Director

F.3.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP allows the COSS to ensure that the MS4 is functioning properly and to reduce the pollutants discharged from the system.

F.3.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The MS4 must function as designed in order to reduce pollutants discharged from the system. Routine inspections and appropriate maintenance ensure that the MS4 continues to function to meet this water quality goal.

F.4. BMP: STREET SWEEPING AND LITTER PICK UP PROGRAM

Permit Section: 4.2.6(a)4

F.4.1. Description of BMP

The COSS has developed a program to keep litter and debris from being washed from the City's roadways into the MS4. This program consists of street sweeping approximately 260 miles of curb and gutter streets once a month. This program is implemented in accordance with the Street Cleaning Procedures in Appendix F.

F.4.2. Measurable Goal(s):

a. Sweep 260 miles of roadway monthly

F.4.3. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Daily
d. *Month/Year of Each Action:* 2013 - 2017

F.4.4. Documentation to be submitted with each annual report:

A summary of street sweeping activities conducted during that year's reporting year will be included in the annual report.

F.4.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Field Services Unit Manager

F.4.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP will reduce the amount of litter and other pollutants being discharged from City streets into the MS4.

F.4.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will keep records or make estimates, based on accepted estimation techniques, of the amount of debris removed through each of these activities.

F.5. BMP: EMPLOYEE TRAINING

Permit Section: 4.2.6(a)5

F.5.1. Description of BMP

The COSS will continue to facilitate one (1) training session per year for COSS employees whose jobs keep them outside and mobile. The employee training session shall address stormwater related topics in an effort to ensure that employees are kept up to date with on-going changes in stormwater management. Representatives from the divisions within the Community Development and Public Works Departments are required to attend the training sessions.

F.5.2. Measurable Goal(s):

a. Conduct one employee training session per year

F.5.3. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Annual
d. *Month/Year of Each Action:* 2013 - 2017

F.5.4. Documentation to be submitted with each annual report:

The date of any training conducted and the number of attendees will be included in that year's annual report.

F.5.5. Person (position) responsible for overall management and implementation of the BMP: Public Works Director and Community Development Director

F.5.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP will help prevent water quality impacts due to activities undertaken by employees during municipal operations.

F.5.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will keep records of any spills or discharges related to municipal operations. If training is successful, there should be minimal municipal operation spills.

F.6. BMP: DEBRIS DISPOSAL

Permit Section: 4.2.6(a)6

F.6.1. Description of BMP

The COSS will properly dispose of wastes including litter, debris, sediment, and other pollutants, removed from the drainage system during maintenance, street sweeping, litter pickup, or any other municipal activity. Waste will be disposed of in an active, permitted landfill.

F.6.2. Measurable Goal(s):

a. Take 100% of waste removed from the MS4 to an active, permitted landfill.

F.6.3. Schedule:

a. *Interim Milestone Dates:* 2013
b. *Implementation Date:* n/a
c. *Frequency of Actions:* Daily
d. *Month/Year of Each Action:* 2013 - 2017

F.6.4. Documentation to be submitted in each annual report:

Records of the amount of waste disposed of at the landfill will be included in the annual report.

F.6.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Field Services Unit Manager

F.6.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP ensures wastes resulting from stormwater management activities are disposed of appropriately and prevented from re-entering MS4.

F.6.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will keep records or make estimates, based on accepted estimation techniques, of the amount of debris disposed of at the landfill.

F.7. BMP: NEW FLOOD CONTROL PROJECT ANALYSIS

Permit Section: 4.2.6(a)7

F.7.1. Description of BMP

The COSS ensures that all new flood control projects are assessed for water quality impacts. For the purposes of this BMP, the COSS interprets "Flood Control Projects" to refer to detention and retention ponds/basins. All new developments are currently required to comply with the COSS Post-Construction Stormwater Management Ordinance and GSMM, which require that stormwater management controls address water quality as well as water quantity protection.

F.7.2. Measurable Goal(s):

a. Ensure 100% of new flood control projects comply with the COSS ordinance and GSMM

F.7.3. Schedule:

a. *Interim Milestone Dates:* n/a
b. *Implementation Date:* 2013
c. *Frequency of Actions:* Annually
d. *Month/Year of Each Action:* 2013 - 2017

F.7.4. Documentation to be submitted in each annual report:

The number of plans reviewed where flood management projects were assessed for water quality impacts during the reporting period will be submitted annually.

F.7.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Director and Community Development Director

F.7.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP will improve the water quality treatment potential of flood control projects throughout the COSS.

F.7.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The GSMM provides pollutant removal efficiencies for all types of detention/retention facilities constructed or retrofitted in accordance with the GSMM standards. The COSS will provide information in the annual report on the number of new ponds constructed in accordance with GSMM standards.

F.8. BMP: EXISTING FLOOD CONTROL PROJECT ANALYSIS

Permit Section: 4.2.6(a)8

F.8.1. Description of BMP

The COSS has developed procedures to ensure that existing flood control projects are assessed for the potential to retrofit for additional water quality protection. The Water Quality Assessment Procedures are included in Appendix H. For the purpose of this BMP, the COSS interprets "Flood Control Projects" to refer to detention and retention ponds/basins. The COSS will review existing detention/retention ponds and assess the potential to retrofit these publicly-owned structures to incorporate additional measures to improve water quality treatment. The assessment will analyze the facility's compliance the COSS Post-Construction Stormwater Management Ordinance and GSMM which requires that stormwater management controls address water quality as well as water quantity criteria.

F.8.2. Measurable Goal(s):

a. Assess one (1) existing flood control project per year

F.8.3. Schedule:

a. *Interim Milestone Dates:* 2013
b. *Implementation Date:* n/a
c. *Frequency of Actions:* Annually
d. *Month/Year of Each Action:* 2013 - 2017

F.8.4. Documentation to be submitted with each annual report:

A summary of the water quality assessment for the existing flood control project will be included in the annual report.

F.8.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Director and Public Works Stormwater Unit Manager

F.8.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP will improve the water quality treatment potential of existing flood control projects throughout the COSS.

F.8.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The GSMM provides pollutant removal efficiencies for all types of flood control projects constructed or retrofitted in accordance with the GSMM standards. The COSS will provide information in the annual report on the number of existing ponds assessed and the number of ponds retrofitted to meet GSMM standards.

F.9. BMP: MUNICIPAL FACILITY INSPECTIONS

Permit Section: 4.2.6(a)9

F.9.1. Description of BMP

The COSS will develop an inventory of all municipal facilities with the potential to contribute pollutants to the MS4 by February 15, 2014. The COSS will continue to update this inventory annually.

F.9.2. Measurable Goal(s):

a. Complete inventory of municipal facilities by February 15, 2014 and submit updated inventory annually to EPD
b. Inspect 25% of municipal facilities in the inventory annually beginning in 2014

F.9.3. Documentation to be submitted with each annual report:

The inventory will be updated annually and submitted with each annual report if a facility has been added or removed during the previous year. Documentation of inspections conducted during that year's reporting period will be included in each annual report.

F.9.4. Schedule:

a. *Interim Milestone Dates:* Submit inventory of municipal facilities by February 15, 2014
b. *Implementation Date:* 2014
c. *Frequency of Actions:* Annually
d. *Month/Year of Each Action:* 2014 - 2017

F.9.5. Person (position) responsible for overall management and implementation of the BMP:

Public Works Stormwater Unit Manager

F.9.6. Rationale for choosing BMP and setting measurable goal(s):

This BMP will prevent, or identify and remove illicit discharges from municipal facilities.

F.9.7. How will the City determine whether this BMP is effective in reducing pollution to stormwater in accordance with Part 5.1.4 of the Permit

The COSS will maintain records of municipal facility inspections and any illicit discharges removed.